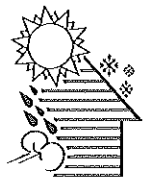
Work Order Bid (ID)

CAC Housing Energy Services



CAC Housing &
Energy Services

WORK ORDER INFORMATION

Work Order Name: WO/80008KN1935/1
Work Order Type: Weatherization
Audit Name: 80008KN1935-Audit

CLIENT INFORMATION

Client ID: 80008KN1935

AGENCY INFORMATION

Agency: Knoxville- Knox County Community Action Agency
Address: (PO Box 51650) 2247 Western Avenue
Knoxville, TN 37950-1650

Agency Phone: (865) 244-3080
Fax: (865) 544-1647
Email Address:

Agency Contact: Jackson, Rocky

Work Phone: (865) 244-3080
Cell Phone:
Email Address: rocky.jackson@cachousing.org

Company Name & License Number: _____

Contractor's Signature: _____

COMMENT

Comments
Single Family Dwelling
Contractor to follow 2006 International Residential Code as adopted by the City of Knoxville or Knox County as applicable.
City-House age is 1920
Contractor required to observe both RRP rule and LSW practices.
RRP Certified Firm/Renovator Required

Measures

Measure 1 **Infiltration Redctn** **Components** **Inspected** ☐

Comment Reduce air infiltration with 8 air seals. Each air seal is equal to 100 cfms. It is the responsibility of the contractor to find the air leaks. This is best performed with a Blower Door. Contractor must meet or exceed the targeted #. A house must not be brought below 1500 cfm @ 50 pascals. No CHANGE ORDER for air seals below the targeted #.
"Open" Ring, Front Door, Pre 3221 CFM @ 50 pascals. Target is 2421 CFM @ 50 PA..

Seall plumbing penetrations
Seal around dryer vent
Seal around water heater
Seal around closet in family room
Refer to Appendix A- Standards for Weatherization Materials and Tennessee Weatherization Field Guide.

Replace door jamb D-1
Remove old door jamb before installing new door jamb. Door Jamb must be one solid piece. Door Jamb
must be caulked and painted with 1st quality exterior semi-gloss paint or stained/sealed to match
existing trim. Refer to Appendix A- Standards for Weatherization Materials and Tennessee Weatherization
Field Guide.

					Estimated			Actual		
#	Material / Labor	Description / Comment	Units	Qty	Unit Cost	Total	Qty	Unit Cost	Total
1	Labor	labor	Each	1					
1	Miscellaneous Su	Air sealing Measures as Listed	Each	1					
2	Doors	Replace Door Jamb	Each	1					
2	Labor	labor	Each	1					

Other Detail

Measure Sub Total: ***Sub Total:***

Field Notes:

Measure 2 **DWH Tank Insulation** ***Components*** ***Inspected***

Comment

Water heaters should be re-insulated to at least R-10 with an external insulation blanket unless water
heater label gives specific instructions not to insulate or the water heater is already insulated. Keep insulation at
least 2 inches away from gas valve and burner access panel. Don't install insulation below the burner access
panel .Flammable Vapor Ignition Resistant models have combustion intake vents that must be left open. Follow
the manufacturer's instructions when installing insulation blankets on (FVIR) water heaters so to not damage unit.
Don't cover the pressure relief valve and discharge pipe with insulation. Don't insulate the tops of gas fired water
heaters to avoid obstructing drat diverter. Mark the blanket to locate the thermostat and heating element access
plates or cut the blanket at these locations. When you cut the blanket , cut the bottom and the sides but not the
top. This creates a flap that remains closed in place. Don't cover the pressure relief valve and discharge line. Cover
the top of the water heater with insulation if it doesn't obstruct the pressure relief valve. Install three zip tie straps
1st 6" from the top 2nd in the Middle, 3rd- 6" from Bottom).

					Estimated			Actual		
#	Material / Labor	Description / Comment	Units	Qty	Unit Cost	Total	Qty	Unit Cost	Total
1	Hot Water Equipm	DHW Tank Insulation	Each	1					
2	Labor	DHW Tank Insulation	Each	1					

Other Detail

Measure Sub Total: ***Sub Total:***

Field Notes:

Measure 3 **DWH Pipe Insulation** **Components** **Inspected** ☐

Comment Includes labor cost. Insulate the first 6 feet of hot and cold water pipe from water heater. Use pipe wrap with a
R-value of at least 2. Cover elbows , unions, and other fittings to the same thickness as pipe. All corners must be
Cut properly. Keep pipe insulation 6 inches away from single wall vent pipe and 1 inch away from Type B vent.
Interior diameter of pipe sleeve must match exterior diameter of pipe. Fasten with zip ties, tape, or other
approved method. Refer to Appendix A- Standards for Weatherization Materials and Tennessee Weatherization
Field Guide.

				Estimated			Actual		
#	Material / Labor	Description / Comment	Units	Qty	Unit Cost	Total	Qty	Unit Cost	Total
1	Insulation	DHW Pipe Insulation	Each	1					
2	Labor	DHW Pipe Insulation	Each	1					

Other Detail

Measure Sub Total: **Sub Total:**

Field Notes:

Measure **4** **Attic Ins. R-30** ***Components*** A1 ***Inspected***

Comment

Attic Insulation
Includes labor cost. Contractor to install 1 ruler for every 300 square foot of attic space showing depth of insulation. Insulation should cover the entire area intended for insulation without voids or edge gaps. Blown insulation should be installed at sufficient density to resist settling, according to manufacturer's instructions .Loose fiberglass is blown in attics from 0.5 to 0.9 pcf and at that density the R-value is around 3.2 per inch. Loose cellulose is blown in attics from 0.6 to 1.2 pcf and at that density range , the R-value is around 3.7 per inch. Insulation should be protected from air migrating around and through it by an effective air barrier. Air sealing attics must precede attic insulation and this may require removing existing insulation and debris that currently prevent effective air sealing. Box around recessed light fixtures and exhaust fans to prevent overheating and/or fire. Install collars or dams around masonry chimneys, B-vent chimneys, and manufactured chimneys after sealing the air leaks around them. ✓ if rolled metal is used as a barrier around heat-producing devices or chimneys, it must be fastened securely to the ceiling joist so the barrier won't collapse. Barriers should extend at least 4 inches above the insulation and be secured to keep insulation a minimum of 3 inches away from the heat-producing device. ✓ All-fuel wood-stove chimneys should have ventilated insulation shields. Covering recessed light fixtures: Covering recessed light fixtures with fire-resistant drywall or sheet-metal enclosures reduces air leakage and allows insulation to be blown around the box. ✓ If you plan to cover an electrical junction box with insulation, mark its location with a sign, flag, or other marker.
Install baffles in every joist or truss bay to ensure no insulation enters the soffit area. Seal holes, gaps, and penetrations in attic before insulating. Seal around chimney with sheet metal and high temperature silicone or fire resistant foam. Install R-30 fiberglass batt secured to attic access and weather strip with foam tape. Contractor to install using Resnet Grade 1 Standards. Refer to Appendix A- Standards for Weatherization Materials and Tennessee Weatherization Field Guide. The addition of insulation in an existing home is a common weatherization measure. Whenever there is installation of any type of floor, wall, or attic insulation, the Contractor must provide a certificate. This certificate is referred to as a "receipt" in the Federal Trade Commission's (FTC) guidance. This will be effective with any job posted August 15th or later.

This certificate should be given to the Client and/or Owner of the property. In addition, a copy of the certificate must be posted at the property and a copy of the certificate must be inserted in the Client's file and retained at the Agency.

Points to remember about the Insulation Certificate:

•The copied certificate posted at the property should be secured to a rafter, stud, or joist. It must be in plain view and placed close to an opening of the crawl space or attic for accessibility.

•For wall insulation a certificate should be secured on a wall in the attic if possible.

•A certificate can combine areas where insulation was installed as long as the certificate reflects all information for each area.

•For roll insulation the certificate must clearly show all the coverage area(s) where the insulation was installed, thickness of the insulation, and the R-value of the insulation installed. The certificate must be dated and signed by the Insulation Contractor.

•For loose-fill insulation, the certificate must be dated and signed by the Contractor, show all the coverage area(s), initial installed thickness, minimum settled thickness, R-value, and the number of bags used.

•Although this insulation has not been approved by DOE for insulating use in the WAP, per the FTC, spray foam insulation certificate must be signed and dated by the Contractor, show all the coverage area(s) of the insulation and the R-value of the insulation installed.

•For aluminum foil, the receipt must show all the coverage area(s), the number and thickness of the air spaces, the direction of heat flow, and the R-value.

When providing the insulation certificate, Contractors who install insulation must comply with federal regulation 460.17.

§ 460.17 What installers must tell their customers.

If you are an installer, you must give your customers a contract or receipt for the insulation you install. For all insulation except loose-fill and aluminum foil, the receipt must show the coverage area, thickness, and R-value of the insulation you installed. The receipt must be dated and signed by the installer. To figure out the R-value of the insulation, use the data that the manufacturer gives you. If you put insulation in more than one part of the house, put the data for each part on the receipt. You can do this on one receipt, as long as you do not add up the coverage areas or R-values for different parts of the house. Do not multiply the R-value for one inch by the number of inches you installed. For loose-fill, the receipt must show the coverage area, initial installed thickness, minimum settled thickness, R-value, and the number of bags used. For aluminum foil, the receipt must show the number and thickness of the air spaces, the direction of heat flow, and the R-value.

Cut in the ceiling an attic access door 22" x 30". If unable to achieve, then opening must be equal to 660
square inches 22" x 30". An attic access door is installed as a complete unit. A door is inclusive of foam
seal, trim, paint (1st quality semi gloss color to be chosen by homeowner, caulk, and R-30 Batt
insulation. Build an insulation dam around the attic access hatch. Insulate the hatch to R-30 value. Build the dam
with rigid materials like plywood or oriented strand board so the dam supports

the weight of the person entering
or leaving the attic. Weatherstrip the attic access to air seal the access and provide uninterrupted air barrier
between the attic and conditioned space. It is the best practice to seal hatches in the unconditioned space such as
carports and attached garages and stairwells. All attic hatches must have a locking device that securely hold the
access in place and slightly compresses the weatherstripping.. Do not cut the framing member to install a hatch
without approval from a local agency, a structural engineer, and local codes enforcement if applicable. The
dam's purpose is to prevent loose-fill insulation from falling out of the attic hatch when opened. Install latches,
sash locks, gate hooks or other positive closure to provide substantially airtight hatch closure. No changes allowed
. Refer to Appendix A- Standards for Weatherization Materials and Tennessee Weatherization Field Guide.

				Estimated			Actual		
#	Material / Labor	Description / Comment	Units	Qty	Unit Cost	Total	Qty	Unit Cost	Total
1	Labor	Attic Insulation - Fiberglass, Blown - R-30	SqFt	810					
1	Insulation	Attic Insulation - Fiberglass, Blown - R-30	SqFt	810					
2	Miscellaneous Su	attic access	Each	1					
2	Labor	labor	Each	1					
3	Miscellaneous Su	baffles	Each	45					
3	Labor	labor	Each	45					

Other Detail

Measure Sub Total: **Sub Total:**

Field Notes:

Measure 5 **Install/Replace Heatpump** **Components** H1,AC1,AC2 **Inspected** ☐

Comment

Includes labor cost. Must be installed by a licensed mechanical contractor. Must perform an ACCA Manual J and submit with invoice. Must be equal to Amana or Goodman 13 Seer Package Heat Pump, 10KW emergency heat. Size is approximately 2.0 ton. Final size will be determined by the Director of Housing. If size on ACCA Manual J is different from this write up, contact CAC before install for approval. Shroud must be 4 sided.

Install thermostat. Must educate client on operation of thermostat.

Contractor to provide warranty information at inspection.

				Estimated			Actual		
#	Material / Labor	Description / Comment	Units	Qty	Unit Cost	Total	Qty	Unit Cost	Total
1	Heating Equipmen	Heatpump Replacement 2.0 Ton Package System	Each	1					
2	Labor	labor	Each	1					

Other Detail

Measure Sub Total: **Sub Total:**

Field Notes:

Measure 6 Storm Windows **Components** W5,W6 **Inspected** ☐

Comment Windows

Includes labor and material. Refer to House diagram for estimated measurements. Responsibility of contractor to verify measurements in the field before ordering window(s). Contractor to include the thermal break, caulking, framing, and any other related items to convey a completed measure. Storm Windows should be sized correctly and fit tightly in the opening. Caulk storm windows around the frame except for weep holes at the bottom that must not be sealed. If weep holes are not manufactuered into the storm they should be drilled. Don't allow storm windows to restrict or ventilation through movable windows .Choose windows that are openable from the inside or install pin on storm sashes that open along with the moveable primary window..Replacement windows must have a U-Factor less than or equal to U-0.35 as rated by the National Fenestration Rating Council or approved equal.

Refer to house diagram with window sizes. Responsibility of contractor to verify measurements in the
field before ordering window . Refer to Appendix A- Standards for Weatherization Materials
and Tennessee Weatherization Field Guide.

					Estimated			Actual	
#	Material / Labor	Description / Comment	Units	Qty	Unit Cost	Total	Qty	Unit Cost	Total
1	Other	Storm Window	Each Window	2					
1	Windows	Storm Window	SqFt	18.47					
Other Detail									

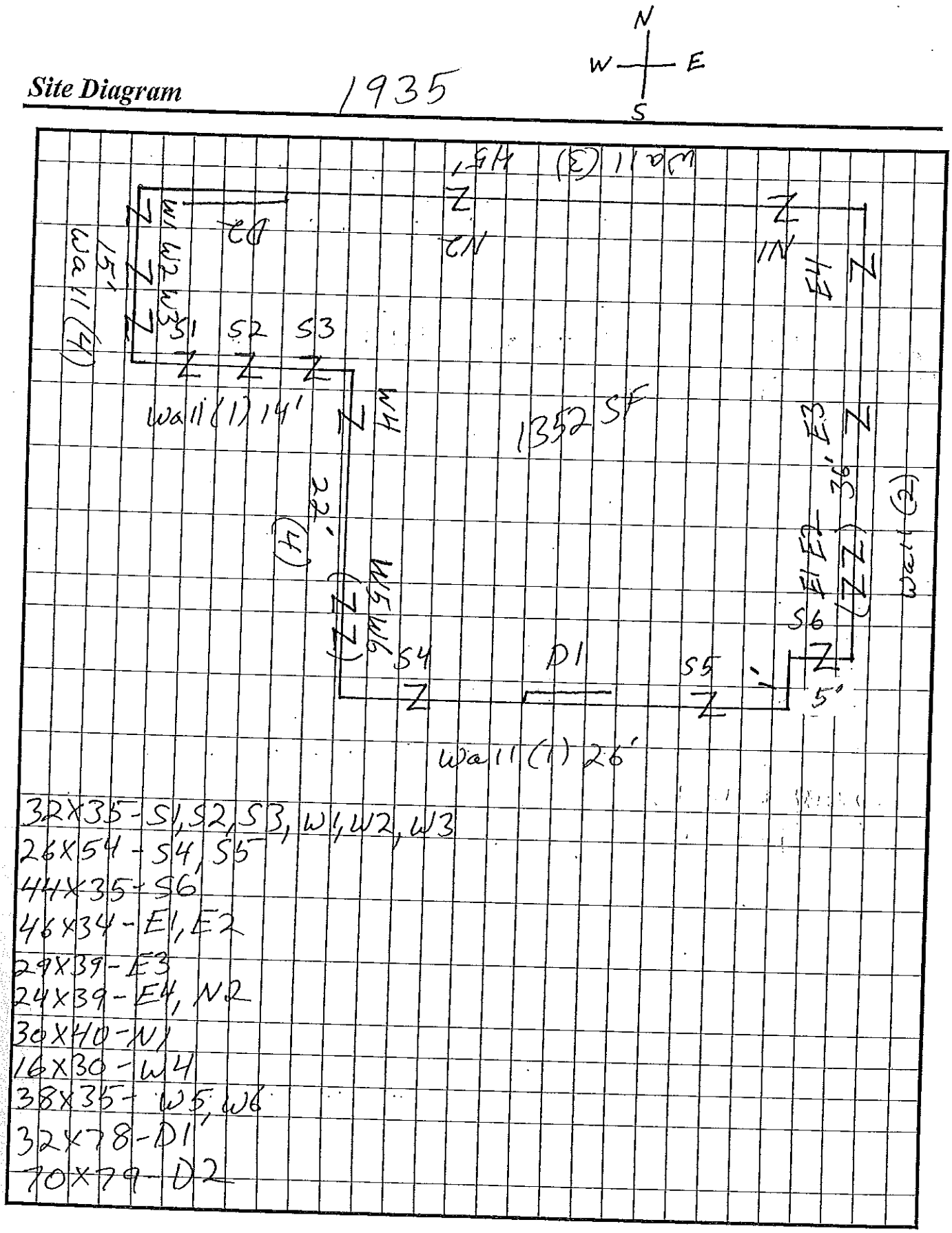
Measure Sub Total: **Sub Total:**

Field Notes:

Work Order Grand Total: **Grand Total:**

Site Diagram

1935



32X35 - S1, S2, S3, W1, W2, W3
26X54 - S4, S5
44X35 - S6
46X34 - E1, E2
29X39 - E3
24X39 - E4, N2
30X40 - N1
16X30 - W4
38X35 - W5, W6
32X78 - D1
70X79 - D2

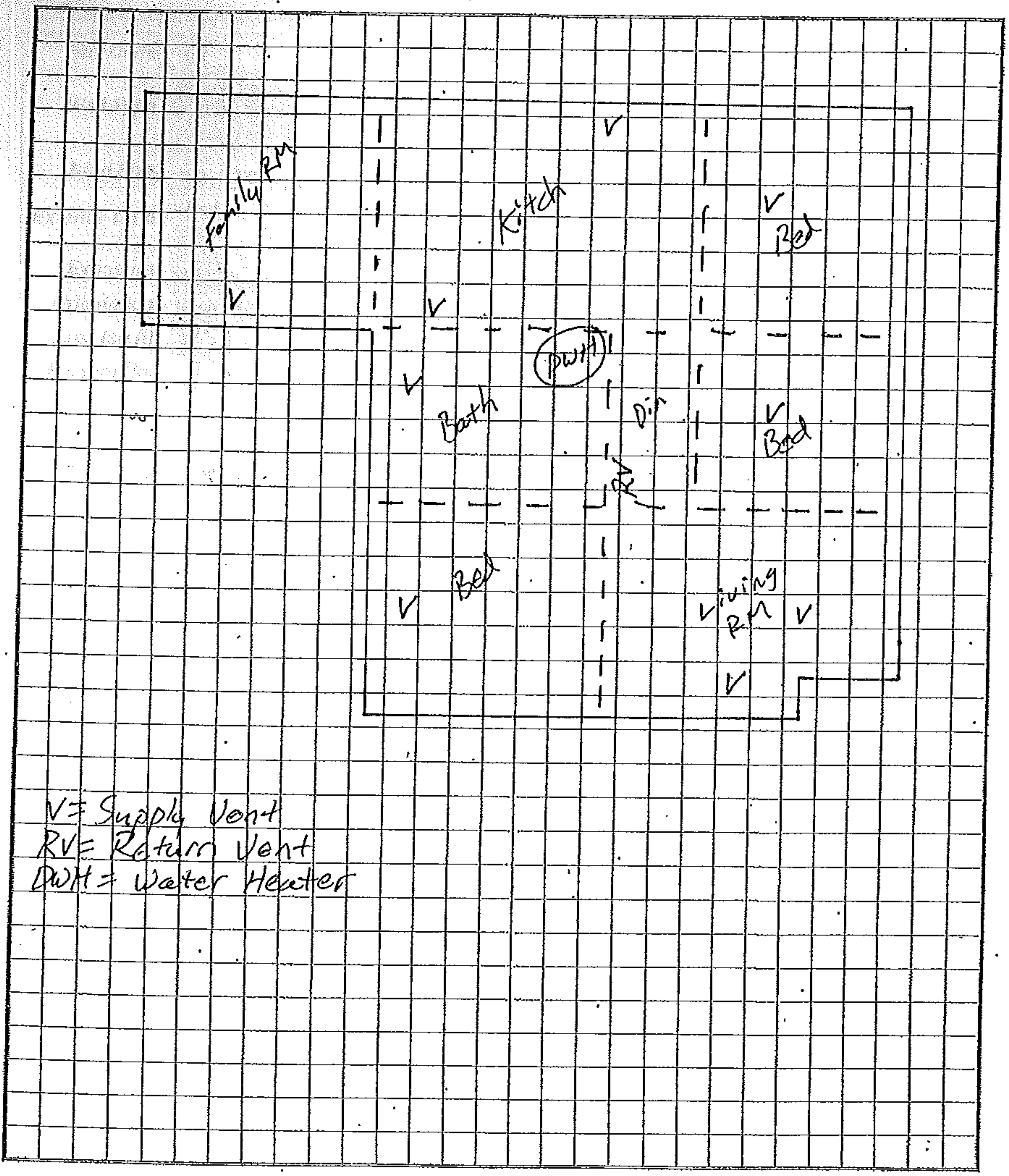
Client Name:
Client ID:

NEAT Data Collection Form

DOE Weatherization Assistant

Site Diagram

1935



Client Name:
Client ID:
Alt. Client ID: